

Figure 2A, need not include such additional sheaths according to some embodiments of the present invention.

[0018] As illustrated in Figure 2A, according to one embodiment, an outer diameter of sheath 29 about coil 28 is approximately equal to or greater than a length of a minor axis of lumen 21, which is shown as item 32 in Figure 3. Figure 3 is a section view of multi-lumen tube 20 sans conductors. Figure 3 illustrates inner surface of lumen 21 forming a substantially elliptical cross-section including a major axis having a length 31, which is greater than minor axis length 32; length 31 ranges between approximately 0.025 inch and 0.080 inch and length 32 ranges between 0.015 inch and 0.065 inch, according to some embodiments. Lumen 21 is positioned with respect to lumens 24A-C such that a minimum wall thickness 30A, 30B for adequate insulation is maintained between each of lumens 21, 24A-C and minimum wall thickness 30A is maintained between lumens 21 and 24A-C and an outer surface 23 of tube 20; minimum wall thicknesses 30A-B range between approximately 0.002 inch and 0.015 inch according to embodiments of the present invention. Furthermore, according to embodiments of the present invention a minimum outer diameter of tube 20 is achieved while providing the adequate insulation via the arrangement of lumens 21 and 24A-C, which are sized to β accommodate appropriate conductors (reference Figures 2A- ϕ); a minimum outer diameter of tube 20 ranges between approximately 0.040 inch and approximately 0.120 inch and diameters of lumens 24A-C range between approximately 0.008 inch and approximately 0.025 inch according to some embodiments. Figure 3 further illustrates upper surfaces 21A and 21B of lumen 21 flattened, thereby creating asymmetrical portions on either side of the major axis, in order that minimum wall thickness 30B between lumens 24A and 24C and lumen 21 is maintained while maximizing space within lumen 21; such a configuration conforms herein to the term "substantially elliptical". In an alternate embodiment according to the present invention, lumen 21 is symmetrical about the major axis either being formed as an approximately 'pure' ellipse or having flattened

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